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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/544,865	04/07/2000	Pauline Sai-Fun Yeung	04509.P010	9546

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EXAMINER

BLOUNT, STEVEN

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 02/25/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

9/544,865

Applicant(s)

YEUNG, PAULINE SAI-FUN

Examiner

Steven Blount

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/04/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9-18 is/are rejected.
- 7) ☒ Claim(s) 6-8 and 19-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Claim Rejections - 35 USC § 112

1. Claims 1 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 13, the use of the word "flushing" (line 4 of claim 1) and "flush" in claim 13 line 4 is inappropriate and indefinite. In the context of computer memory, "flush" means, usually, to destroy data in memory. This is not occurring here, as the data is "transmitted" as described on page 6, line 18 of the specification.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 - 5 and 11 - 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,495,615 to Wilcke. With respect to claim 1, Wilcke teaches receiving queues of data over bus (switching matrix) 6 and placing it in another set of queues 7, 8, etc. (see the numbers of the output buffers to the right in figure 1) "based on" the cycle number of the time slot, as described in column 2, lines 1+. See also col 4, lines 60+ where it describes how buffers 3 and 4 are alternately read and filled according to the clock sequence: "The reading, which also occurs at the rhythm of the central clock, takes place

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consecutively according to a sequence indicated by a control control device 5, from which, also at the same time, a switching matrix is set and the destinations of the signals are indicated in one of the output buffers 7 or 8 to which the signals are switched through and which the signals are switched through and belong to an output circuit." Note further that there are 8 queues on each side. While it is not explicitly stated that the packets are isochronous, wherein the definition of isochronous is "a type of data transmission in which characters are separated by a whole number of bit-length intervals. Timing information is embedded in the data stream." ("The Dictionary of Computing & Digital Media", Brad Hansen, 1999), col 4 lines of Wilcke teaches that the data is carried in-band, and that the origin and destination is used to obtain the timing, as is described in col 2, lines 25 through 50, such that the teachings of Wilcke provide an obvious variation of using isochronous packets.

With regard to claim 2, the number of cycles from which to transmit the packet is an obvious matter of choice. With regard to claim 3, there are multiple queues of Wilcke from which one can be chosen, wherein four would be an obvious number. With regard to claim 4, since the cycles are all operatively the same, it is immaterial whether you call a cycle c or c-1. With regard to claim 5, it would be obvious to clear the queue that you are going to put a packet into. With regard to claims 11 – 14, the apparatus limitations are described in the method steps described above, and note also, with respect to claim 14, the data lines that transmit information from the buffers to the switching matrix. Further note that with regard to claim 13, the end of line 4 to line 5, it is noted that Wilcke

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teaches that "the output buffer segments 8.1 to 8.4 will then be filled and the output buffer segments 7.1 to 7.4 will be read sequentially in parallel for each output 9" (col 9, lines 1+) which, in combination with the previous teachings in this section of the patent, would suggest "flushing another of the egress queues based on the cycle number". Further note control unit 5 in figure 1. With regard to claim 15, note that Wilcke teaches the use of a time-space-time switch. With regard to claim 16, member 6 in Wilcke has both ingress and egress ports, and using 3 queues as opposed to some other number (2) would be obvious. With regard to claim 17, note members 7 and 8 in figure 1 of Wilcke. With regard to claim 18, more than 4 queues are shown in figure 1 for the input and the output buffers.

4. Claims 9 - 10 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 4,495,615 to as applied above, and further in view of U.S. patent 6,137,807 to Rusu et al.

With regard to claim 9, Wilcke teaches the invention as described above, but does not teach the use of free and used pointers. This is taught in Rusu et al. See figure 7. It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided Wilcke with pointers in the memory, in light of the teachings of Rusu, in order to help manage the memory in the queues and improve the flow of information through the switch.

With regard to claim 10, the use of pointers in this fashion would be obvious in view of the teachings of Rusu. See column 5.

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Response to Arguments

5. The Safadi reference is no longer relied upon, in view of the remarks with regard to the use of the term "flushing".

6. Claims 6-8 and 19-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Steven Blount may be reached at the Patent Office between the hours of 9:00 and 5:30 Monday through Friday at (703) 305 – 0319.


Ajit Patel
Primary Examiner

SB


2/19/03